Optical two-way Loss Tester + ORL Comparison

Specification	Meaning	Kingfisher KI 7343-InGaAs	Kingfisher KI 7742-InGaAs	Exfo FOT-933	Exfo FOT-923-BR23BL
'Autotest'					
Trade name		'Autotest'	'Autotest'	'FasTesT'	'Fastest'
Autotest display update	Real time is best	**Real time**	**Real time**	One reading only in > 10 sec	One reading only in >30 sec
Data acquisition modes	Fast is best Direct is best	**8 seconds direct to report or 9 seconds into memory**	**5 seconds for a complete test or 8 seconds direct to report**	<10 seconds into memory only	<30 seconds into memory only
Autotest functionality		**bi-directional loss, ORL, power meter**	bi-directional loss, power meter	bi-directional loss, ORL	bi-directional loss
Data memory	Big is best	**1200 complete tests**	**1200 complete tests**	1000 complete tests	512 two λ tests
Autotest on Power meter port	Yes is good	**Yes**	**Yes**	No	No
Autotest compatibility with other products		**All KI7000, KI3000 & Agilent N397xA Handheld series**	**All KI7000, KI3000 & Agilent N397xA Handheld series**	None	None
Source					
λ	Small is best	1310, 1550 ± 20 nm	1310, 1550 ± 20 nm	1310, 1550 ± 20 nm	1310, 1550 ± 25 nm
Warm-up period	Small is best	**Zero warm up**	15 min	6 min	20 min
Stability	Small is best	**0.03 dB max for 15 min ± D 3°C**	**0.03 dB max for 15 min ± D 3°C, after warm up**	8 hrs: 0.1 dB @ 23°C	8 hrs: 0.1 dB @ 23°C
Stability over temp	Small is best	**0.2 dB max over -15 to 55 °C**	0.6 dB typ over -15 to 55 °C	Not specified	Not specified
Output power	Big is best	-7 dBm	-9 dBm	**-3.5 dBm**	**-5 / -7 dBm**
Output adjustment	Yes is best	**6 dB in 0.01 dB steps**	**6 dB in 0.01 dB steps**	No	No
Spectral width	Small is best	3 nm typ	3 nm typ	≤ 5 nm	<5 nm
Tone generator		**270 Hz, 1 KHz, 2 KHz**	**270 Hz, 1 KHz, 2 KHz**	?	?
Meter					
Detector type		InGaAs	InGaAs	InGaAs	InGaAs
Autotest Functionality	Yes is best	**Yes**	**Yes**	No	No
Range over quoted uncertainty	Big is best	+5 to –70 dBm	+5 to –70 dBm	**+6 to -73** dBm	+4 to -70 dBm @ 23°C & 1310 nm only
Uncertainty over power, temp, connector range	Temp and time are important!	**0.3 dB over +5 to –70 dBm, -15 to 55 °C, all connector types**	**0.3 dB over +5 to –70 dBm, -15 to 55 °C, all connector types**	3 dB over +6 to -73 dBm @ 23°C only, 1550 nm, FC connector only	0.06 dB dBm @ 23°C, 1310 nm, after zeroing and 20 min warm up
Warm-up	Yes is bad!	**No**	**No**	Not specified	0 Yes, 20 minutes / Yes
Polarisation sensitivity	Small is best	**< 0.005 dB**	**< 0.005 dB**	Not specified	Not specified
Calibration λ nm		820 – 1620 nm, 24 calibrated wavelengths	850, 1300, 1310, 1550, 1610 nm	**800 – 1650 nm, 40 calibrated wavelengths**	**800 – 1650 nm, 40 calibrated wavelengths**
Calibration accuracy	Small is best	**0.09 dB (2%)**	**0.13 dB (3%)**	0.20 dB	0.21 dB
Calibration traceability	Traceable is best	**Fully traceable**	**Fully traceable**	ISO9001	ISO9001
Calibration cycle	Big is best	3 year	3 year	3 year	Not specified
Damage level	Big is best	**+10 dBm**	**+10 dBm**	Not specified	Not specified
Tone detection	More is best	**150 – 9999 Hz**	**150 – 9999 Hz**	None	Not specified
Max / Min recording	Yes is best	**Yes**	**Yes**	No	No
Detector Physical ruggedness		**Very hard to damage**	**Very hard to damage**	Glass Window can break during cleaning	Glass Window can break during cleaning
ORL					
ORL range		65 dB		65 dB	65 dB
Port isolation		Standard > 30 dB Optional > 50 dB		Not specified	Not specified

Accuracy over range		0.5 dB: 0 to 50 dB 1.0 dB: 50 to 65 dB		Not specified	Not specified
Resolution		0.01 dB		0.01 dB	0.01 dB
User Residual Reflection Offset Facility	Yes is best	**Yes**		No	Yes
User calibration offset facility	Yes is best	**Yes**		No	No
General					
Testing software		**KITS™ software** **Easily user modifiable**	**KITS™ software** **Easily user modifiable**	ToolBox 6 software Compiled, not modifiable.	ToolBox 6 software Compiled, not modifiable.
Testing software functionality		**Real time testing/reporting & post-processing, or via download**	**Real time testing/reporting & post-processing, or via download**	post-processing after download only	post-processing
Battery life hours	More is best	**360** hrs meter **190** hrs source	**360** hrs meter **190** hrs source	< 9 hrs	< 10 hrs
Standard connector	More is better	**SC, FC, ST**	**SC, FC, ST**	Select one	Select one
Small Form Factor Connectors		**LC/F3000, MU**	**LC/F3000, MU**	Only on power meter port	Only on power meter port
Pass/Fail assessment	Yes is good	Yes	Yes	Yes	Yes
Metal free connector[1]	Yes is better	**Yes**	**Yes**	No	No
Operation temperature	Bigger is better	**-15 to 55 °C**	**-15 to 55 °C**	-10 to 50 °C	-10 to 50 °C
Weight / Volume	Smaller is better	**500 gm / 1012 cc**	**500 gm / 1012 cc**	1000 gm / 2344 cc Very Big unit!	1000 gm / 1613 cc
Standard accessories		**ST, FC, SC optical connector adaptors** serial cable, **Traceable certificate,** **pouch, leather holster** **KITS™ software**	**ST, FC, SC optical connector adaptors** serial cable, **Traceable certificate,** **pouch, leather holster** **KITS™ software**	ToolBox 6 software & serial cable, one connector adapter, charger, carry case, holster, cleaning pads, calibration certificate, AC charger	ToolBox 6 software & serial cable, one connector adapter, charger, carry case, holster, cleaning pads, calibration certificate
Warranty	Longer is better	**3-7 years**	**3-7 years**	3 years	1 year
Product maturity		**Mature**	**Mature**	immature	**Mature**

Note 1: Kingfisher instrument is supplied with metal-free optical interchangeable connector adaptors, which avoid critical contamination of connectors used in high power applications.

Disclaimer: This comparison is based on our interpretation of published specifications. No liability is accepted for any inaccuracy. We would be pleased to amend anything found to be inaccurate.

Optical two-way Loss Tester + ORL Comparison - continue

Specification	Meaning	KI 7343-InGaAs	KI 7742-InGaAs	Noyes Turbotest 503B	Acterna OFI-2001
'Autotest'					
Trade name		'Autotest'	'Autotest'	'Turbo'	'TWINtest'
Autotest display update	Real time is best	**Real time**	**Real time**	One reading only	One reading only in >15 sec
Data acquisition modes	Fast is best Direct is best	**8 seconds direct to report or 9 seconds into memory**	**5 seconds for a complete test or 8 seconds direct to report**	Not specified	<15 seconds into memory only
Autotest functionality		**bi-directional loss, ORL, power meter**	bi-directional loss, power meter	bi-directional loss, ORL	bi-directional loss, ORL
Data memory	Big is best	**1200 complete tests**	**1200 complete tests**	500 two λ tests	Not quoted
Autotest on Power meter port	Yes is good	**Yes**	**Yes**	No	Yes
Autotest compatibility with other products		**All KI7000, KI3000 & Agilent N397xA Handheld series**	**All KI7000, KI3000 & Agilent N397xA Handheld series**	None	OLP-15 & OLS-15
Source					
λ	Small is best	1310, 1550 ± 20 nm	1310, 1550 ± 20 nm	1310, 1550 ± 20 m	1310, 1550 nm
Warm-up period	Small is best	**Zero warm up**	15 min	15 min	Not quoted
Stability	Small is best	**0.03 dB max for 15 min ± D 3°C**	**0.03 dB max for 15 min ± D 3°C, after warm up**	8 hrs: 0.1 dB @ 25°C	Not quoted
Stability over temp	Small is best	**0.2 dB max over -15 to 55 °C**	0.6 dB typ over -15 to 55 °C	Not specified	Not quoted
Output power	Big is best	-7 dBm	-9 dBm	-10 dBm	Not quoted
Output adjustment	Yes is best	**6 dB in 0.01 dB steps**	**6 dB in 0.01 dB steps**	Yes	Not quoted
Spectral width	Small is best	3 nm typ	3 nm typ	5 nm	Not quoted
Tone generator		**270 Hz, 1 KHz, 2 KHz**	**270 Hz, 1 KHz, 2 KHz**	None	Not quoted
Meter					
Detector type		InGaAs	InGaAs	InGaAs	Not quoted
Autotest Functionality	Yes is best	**Yes**	**Yes**	No	Yes
Range over quoted uncertainty	Big is best	+5 to –70 dBm	+5 to –70 dBm	+6 to –60 dBm	+10 to -70 dBm
Uncertainty over power, temp, connector range	Temp and time are important!	**0.3 dB over +5 to –70 dBm, -15 to 55 °C, all connector types**	**0.3 dB over +5 to –70 dBm, -15 to 55 °C, all connector types**	Not specified	Not quoted
Warm-up	Yes is bad!	**No**	**No**	Not specified	Not quoted
Polarisation sensitivity	Small is best	**< 0.005 dB**	**< 0.005 dB**	Not specified	Not quoted
Calibration λ nm		**820 – 1620 nm, 23 calibrated wavelengths**	850, 1300, 1310, 1550, 1610 nm	1310, 1550, 1625	Not quoted
Calibration accuracy	Small is best	**0.09 dB (2%)**	**0.13 dB (3%)**	0.25 dB @ 25°C	Not quoted
Calibration traceability	Traceable is best	**Fully traceable**	**Fully traceable**	ISO9001	Not quoted
Calibration cycle	Big is best	**3 year**	**3 year**	1 year	Not quoted
Damage level	Big is best	**+10 dBm**	**+10 dBm**	Not specified	Not quoted
Tone detection	More is best	**150 – 9999 Hz**	**150 – 9999 Hz**	No	Not quoted
Max / Min recording	Yes is best	**Yes**	**Yes**	No	Not quoted
Detector Physical ruggedness		**Very hard to damage**	**Very hard to damage**	Glass Window can break during cleaning	Glass Window can break during cleaning
ORL					
ORL range		65 dB		**70 dB**	Not quoted
Port isolation		Standard > 30 dB Optional > 50 dB		Not specified	Not specified

Accuracy over range		0.5 dB: 0 to 50 dB 1.0 dB: 50 to 65 dB		0.5 dB @ 55 dB RL	Not quoted
Resolution		**0.01 dB**		0.1 dB	Not quoted
User Residual Reflection Offset Facility	Yes is best	**Yes**		Yes	Not quoted
User calibration offset facility	Yes is best	**Yes**		Not quoted	Not quoted
General					
Testing software		**KITS™ software Easily user modifiable**	**KITS™ software Easily user modifiable**	WinTEST Software. Compiled, not modifiable.	WinBudget PC processing software
Testing software functionality		**Real time testing/reporting & post-processing, or via download**	**Real time testing/reporting & post-processing, or via download**	post-processing	post-processing
Battery life hours	More is best	**360** hrs meter **190** hrs source	**360** hrs meter **190** hrs source	32 hrs	13 hrs
Standard connector	More is better	**SC, FC, ST**	**SC, FC, ST**	Fixed SC or FC / APC	Standard fixed connectors Or universal FC, ST, SC, LSA
Small Form Factor Connectors		**LC/F3000, MU**	**LC/F3000, MU**	No	No
Pass/Fail assessment	Yes is good	Yes	Yes	Yes	Yes
Metal free connector[1]	Yes is better	**Yes**	**Yes**	No	No
Operation temperature	Bigger is better	**-15 to 55 °C**	**-15 to 55 °C**	0 to 50 °C	Not quoted
Weight / Volume	Smaller is better	**500 gm / 1012 cc**	**500 gm / 1012 cc**	1200 gm / 1123 cc	Not quoted
Standard accessories		**ST, FC, SC optical connector adaptors** serial cable, **Traceable certificate, pouch, leather holster KITS™ software**	**ST, FC, SC optical connector adaptors** serial cable, **Traceable certificate, pouch, leather holster KITS™ software**	Soft case, serial cable, WinTEST software, reference cable, adapter cap, holster, mandrel, screw driver, hex key screw driver, AC adapter.	B&W LCD screen, RS232 interface and cable, neck strap, AC/DC adapter, soft case, Fixed connectors
Warranty	Longer is better	**3-7 years**	**3-7 years**	1 year	Not quoted
Product maturity		Mature	Mature	Mature	Mature

Note 1: Kingfisher instrument is supplied with metal-free optical interchangeable connector adaptors, which avoid critical contamination of connectors used in high power applications.
Disclaimer: This comparison is based on our interpretation of published specifications. No liability is accepted for any inaccuracy. We would be pleased to amend anything found to be inaccurate.